

# **Communities and Natural Resource Management Syllabus**

Cornelia Butler Flora  
[cflora@iastate.edu](mailto:cflora@iastate.edu)

## **Instructional Objectives:**

Graduates will understand the important aspects of community natural resource management

- Appreciation and measurement of different aspects of natural capital
- Community-based approaches to natural resource management
- The impact of policy and market state and civil society actors on natural resource management at the community level

<b>Community and Natural Resource Management and Natural Resource Management</b>	
<b>Theme:</b> <b>Communities/Community Action</b>	Students will:
<b>Knowledge Level</b>	Know different natural capital indicators of stocks and flows and their relations to other capitals in community development.
<b>Comprehension Level</b>	Ability to interpret the conversation brought to the table from these various perspectives, et. The difference between “economic development” and “eco-development”  Understand the levels of saliency of different stocks and flows.
<b>Application Level</b>	Diagram stocks and flows in the context of cultural issues..
<b>Analysis Level</b>	Assess how differential access to natural resources and the management of them in communities impacts community development.
<b>Synthesis Level</b>	Link community salience, stocks and flows to larger ecosystems.
<b>Evaluation Level</b>	Evaluate local natural resource assets and issues
<b>Theme: Promoting broad-based decision making and action</b>	Students will:
<b>Knowledge Level</b>	Identify basic concept measures and data sources for use in natural resource management.  Identify key natural resource management processes for communities
<b>Comprehension Level</b>	Understand basic theoretical framework for Community Capitals analysis.  Understand local decision-making systems, structures and processes for natural resource management Understand natural resource management processes in own community
<b>Application Level</b>	Case studies of different situations where natural resources impact community development.
<b>Analysis Level</b>	Assess community planning and decision-making and compare to key processes
<b>Synthesis Level</b>	Bring both money-valued and non-money valued benefits and costs using the Community Capitals Framework.
<b>Evaluation Level</b>	Explore how alternative forms of analysis have been introduced into promoting broad based action and decision-making in actual communities.
<b>Theme: Strategies to</b>	Students will:

<b>improve economic, social, cultural, and environmental conditions</b>	
<b>Knowledge Level</b>	<p>Know different cases of communities addressing natural resource issues.</p> <p>Identify sustainable approaches to design.</p>
<b>Comprehension Level</b>	<p>Understand basic theoretical framework</p> <p>Understand alternatives assessment, risk assessment, and cost/benefit analysis.</p> <p>Identify key elements in community cases and lessons learned.</p>
<b>Application Level</b>	Apply the lessons learned about community-based natural resource management to new community settings.
<b>Analysis Level</b>	<p>Understand the policy and social organizational context (status of capitals) in which different strategies seem to work.</p> <p>Case studies and on site evaluations of environments.</p>
<b>Synthesis Level</b>	Ability to anticipate community needs and concerns on specific natural resource development.
<b>Evaluation Level</b>	Compile comprehensive community resource issue report, inclusive of political, structural, scientific, and social impacts and processes.
<b>Theme: Understand and practice importance of balance</b>	Students will:
<b>Knowledge Level</b>	<p>Balance between individual and community benefits and costs.</p> <p>Balance among capitals.</p>
<b>Comprehension Level</b>	Describe participatory planning processes and understand their implications
<b>Application Level</b>	<p>Write policy brief (core)</p> <p>Demonstrate use of citizen involvement techniques.</p>
<b>Analysis Level</b>	<p>Assess and critically examine federal, state and local policies.</p> <p>Compare/contrast techniques for involvement</p>
<b>Synthesis Level</b>	Conduct alternative assessment in local community, incorporating natural and social resources.
<b>Evaluation Level</b>	Assess balance of social, economic and environmental resources in existing plans
<b>Theme: Appreciative norms of behavior in profession</b>	Students will:

<b>Knowledge Level</b>	Professional ethics CDS principles of good practice
<b>Comprehension Level</b>	Explain the implications of ethical and good practice principles for natural resource management
<b>Application Level</b>	Apply professional ethics and principles of good practice to specific situations
<b>Analysis Level</b>	Analyze cases of professional intervention in community based natural resource management issues in light of principles of good practice and professional ethics.
<b>Synthesis Level</b>	Understand the particular implications of ethics and the principles of good practice for natural resources at the local and global level
<b>Evaluation Level</b>	Determine actions that account for local and global ecosystem impacts.

### Texts:

- Flora, C.B., M. Kinsley, V. Luther, M. Wall, S. Odell, S. Ratner, and J. Topolsky. 1999. Measuring Community Success and Sustainability. (RRD 180). Ames, IA: North Central Regional Center for Rural Development.  
[http://www.ncrcrd.iastate.edu/Community\\_Success/about.html](http://www.ncrcrd.iastate.edu/Community_Success/about.html) Measuring Community Success and Sustainability: An Interactive Workbook is available for \$10 to U.S. addresses; \$17 to addresses outside the U.S. To order, send check, money order, purchase order, or MasterCard or VISA information with your request to Kristi Hetland, NCRCRD, Iowa State University, 107 Curtiss Hall, Ames, IA 50011-1050; (515) 294-9768, (515) 294-3180 fax, [khetland@iastate.edu](mailto:khetland@iastate.edu).
- Honadle, George. 1999. How Context Matters: Linking Environmental Policy to People and Place. Bloomfield, CT: Kumarian Press.
- Summers, Gregory. 2006. Consuming Nature: Environmentalism in the Fox River Valley. Lawrence: University Press of Kansas.
- Wyckoff-Baird, Barbara. 2005. Growth Rings: Communities and Trees. Washington, DC: The Aspen Institute. Can be ordered for \$5.00 shipping and handling at: [www.aspeninstitute.org](http://www.aspeninstitute.org).

### Readings:

- Brehm, J.M., B.W. Eisenhauer, and R.S. Krannich. 2006. "Community Attachments as Predictors of Local Environmental Concern: The Case for Multiple Dimensions of Attachment". American Behavioral Scientist. 50:142-165.
- Cortese, Charles F. 1999. "Conflicting Uses of the River: Anticipated Threats to the Resource". Society and Natural Resources. 16(1):1-18.
- Davenport, Mae A. and Dorothy H. Anderson. 2004. "Getting From Sense of Place to Place-Based Management: An Interpretive Investigation of Place Meanings and Perceptions of Landscape Change". Society and Natural Resources. 18(7):625-641.
- Hibbard, Michael and Jeremy Madsen. 2002. "Environmental Resistance to Place-Based Collaboration in the U.S. West". Society and Natural Resources. 16(8):703-718.

- Hibbard, Michael and Jeremy Madsen. 2003. "Response to Sturtevant and Bryan". *Society and Natural Resources*. 17(5):461-466.
- Kline, Jeffrey D. 2005. "Public Demand for Preserving Local Open Space". *Society and Natural Resources*. 19(7):645-659.
- Kleinschmidt, Jim. 2007. "Biofueling Rural Development: Making the Case for Linking Biofuel Production to Rural Revitalization." Carsey Institute Policy Brief No. 5.
- Lauber, T. Bruce and Tommy L. Brown. 2005. "Learning by Doing: Policy Learning in Community-Based Deer Management". *Society and Natural Resources*. 19(5):411-428.
- McCarthy, James. 2006. "Neoliberalism and the Politics of Alternatives: Community Forestry in British Columbia and the United States". *Annals of the Association of American Geographers*. 96(1):84-104.
- Mulale, Kultwano. 2006. "Assessing Social Capital in Low-income Neighbourhoods in Botswana (Case Study of Old Naledi, Gaborone) and Potential for Community Based Municipal Solid Waste Management". Proposal to the Government of Botswana.
- Novek, Joel. 2002. "Intensive Livestock Operations, Disembedding, and Community Polarization in Manitoba". *Society and Natural Resources*. 16(7):567-581.
- Nussbaum, Rudi H., Patricia P. Hoover, Charles M. Grossman, Fred D. Nussbaum. 2003. "Community-Based Participatory Health Survey of Hanford, WA, Downwinders: A Model for Citizen Empowerment". *Society and Natural Resources*. 17(6):547-559.
- O'Neill, Karen M. 2004. "Can Watershed Management Unite Town and Country?" *Society and Natural Resources*. 18(3):241-253.
- Parisi, Domenico, Michael Taquino, Steven Michael Grice, and Duane A. Gill. 2003. "Civic Responsibility and the Environment: Linking Local Conditions to Community Environmental Activeness". *Society and Natural Resources*. 17(2):97-112.
- Riemer, Jeffrey W. 2003. "Grass-Roots Power Through Internet Technology—The Case of the Crandon Mine". *Society and Natural Resources*. 16(10):853-868.
- Sturtevant, Victoria and Todd Bryan. 2003. "Commentary on 'Environmental Resistance to Place-Based Collaboration' by M. Hibbard and J. Madsen". *Society and Natural Resources*. 17(5):455-460.
- Waage, Sissel. 2002. "Collaborative Salmon Recovery Planning: Examining Decision Making and Implementation in Northeastern Oregon". *Society and Natural Resources*. 16(4):295-307.

### **Assignments:**

Each week, you are required to summarize key elements you find in the readings and your response to them on the discussion list. (possible 10 points each week).

You are also to respond to at least two other class members (possible 5 points each week)

Each week has a short assignment related to the topic, based on research in the community you choose (possible 20 points)

There will be a final paper where you related the community capitals to natural resource management, based on your research in your community/watershed and the readings (possible points 200).

### **How to post to the web:**

Please place your comments on the discussion, and respond to specific posts of other students.

You will be expected to post your comments on the readings by Friday, and respond to at least two other class members and post your assignment by Sunday evening at 10 pm your local time.

## Grading:

A = 90% of the total points

B = 80-89%

C = 65-79%

D = 55-64%

F = below 54%

## Module Number

## Topic

### 1. Jan. 22, 2007      **Overview of Community-Based Natural Resource Management**

**Readings** Davenport and Anderson, "Getting from Sense of Place to Place-Based Management: An Interpretive Investigation of Place Meanings and Perceptions of Landscape Change." *Growth Rings*, ch.1 and 2; *Consuming Nature*, Introduction; *Measuring Community Success*, "Outcome 4." For an example of the problems of ignoring natural capital issues and their complexity, see <http://www.latimes.com/news/nationworld/nation/la-na-gatesx07jan07,0,6827615.story?coll=la-home-headlines>

**Due January 26**

**Assignment:** Pick a community that will be the focus of your work throughout the semester. It can be where you live, where you have lived, or a place that you would like to learn more about. Explain why you picked it and identify the watershed in which it is located.

**Due January 28**

### 2. Jan. 29      **Water quantity**

**Readings:** Cortes, "Conflicting Uses of the River.: *Consuming Nature*, ch. 1 and 2; *Growth Rings*, Ch. 3; *Measuring Community Success*, v-8., Outcome 4, Indicator 2.

**Due February 2**

**Assignment:** To what degree is water quantity an issue in your watershed? What evidence do you have that it is a problem? What would be an indicator of changes in water quantity? How might you measure it over time, using the indicator framework?

**Due February 4**

### 3. Feb. 5      **Water quality**

**Readings:** O'Neill, "Can Watershed Management Unite Town and Country?" *Consuming Nature*, ch. 3 & 4; *Growth Rings*, ch. 4.

**Due February 9**

**Assignment:** Where does your community get its water? Is it surface or ground water? How is quality insured? Is water quality a concern for citizens? What evidence is there of that concern? What is a good measure of water quality in your watershed/community?

**Due February 11**

### 4. Feb. 12      **Air quality**

**Readings:** Nussbaum, et al. "Community-Based Participatory Health Survey of Hanford, WA, Downwinder: A Model for Citizen Empowerment". *Consuming Nature*, ch. 5; *Growth Rings*, Ch. 4 & 5. *Measuring Community Success*, Indicator 1, Air quality.

**Due February 16**

**Assignment:** What are sources of air pollution in your community? What measures is the community taking to reduce pollutants in the air or to ensure that air quality remains high? What is a good indicator of changes in air quality in your community?

**Due February 18**

5. Feb. 19

**Waste**

**Readings:** *Consuming Nature*, ch. 6; *Growth Rings* Ch. 6; Mulale, "Assessing Social Capital in Low-income Neighbourhoods in Botswana (Case Study of Old Naledi, Gaborone) and Potential for Community Based Municipal Solid Waste Management".

**Due February 23**

**Assignment:** What happens to household waste in your community? Where is the land fill located? How many years of "life" does it have until it is filled? What are the entities in charge of waste disposal in your community? Are they public or private? How does the community know whether or not they are doing a good job? What would be an indicator of good waste management?

**Due February 25**

6. Feb. 26

**Landscape**

**Readings:** *Consuming Nature*, Conclusions; *Growth Rings*, Ch. 7; Kline, "Public Demand for Preserving Local Open Space." *Measuring Community Success*, "Outcome 4, Indicator 5."

**Due March 2**

**Assignment:** How much open space is there in your community? How much does the community invest in maintaining it? Which entities manage open spaces? What are indicators of the quality of landscape in your community?

**Due March 4**

7. Mar. 5

**Biodiversity**

**Readings:** *Growth Rings*, Ch. 8; Lauber and Brown "Learning by Doing: Policy Learning in Community-Based Deer Management." *Measuring Community Success*, "Outcome 4, Indicator 3."

**Due March 16**

**Assignment:** What kind of biodiversity matters in your community? What groups are there in your community around biodiversity protection or biodiversity as recreation (bird watching, fishing, hunting, botany groups)? What would be a good indicator of changes in biodiversity in your community?

**Due March 18**

8. Mar. 19

**Agriculture**

**Readings:** *Growth Rings*, Ch. 9; Novek, "Intensive Livestock Operations, Disembedding, and Community Polarization in Manitoba." Kleinschmidt, "Biofueling Rural Development: Making the Case for Linking Biofuel Production to Rural Revitalization." *How Context Matters*, Ch. 1 & 2. *Measuring Community Success*, "Outcome , Indicator 4."

**Due March 23**

**Assignment:** How closely is your community linked with agriculture? Do issues of rural or urban soil quality get mentioned in the press? What would be a meaningful measure of soil quality in your community/watershed?

**Due March 25**

9. Mar. 26

### **Forestry**

**Readings:** McCarthy, “Neoliberalism and the Politics of Alternatives: Community Forestry in British Columbia and the United States”; *How Context Matters*, ch. 3.

**Due March 30**

**Assignment:** Are there forested lands in your community or watershed? Urban forestry counts! What would be a good measure of the health of those forests?

**Due April 1**

10. Apr. 2

### **Mining**

**Readings:** *How Context Matters*, ch. 4; Riemer, “Grass-Roots Power Through Internet Technology—The Case of the Crandon Mine.”

**Due April 6**

**Assignment:** What sort of mineral extraction goes on in your community/watershed? Where does the sand and gravel come from for road construction and maintenance? Are the mining and construction companies locally owned? What would be a good measure to make sure that mineral extraction is having positive community impacts?

**Due April 8**

11. Apr. 9

### **Fisheries**

**Readings:** *How Context Matters*, ch. 5 & 6; Waage, “Collaborative Salmon Recovery Planning: Examining Decision-Making and Implementation in Northeast Oregon.”

**Due April 13**

**Assignment:** Is there commercial fishing in your watershed? Where do residents go for recreational fishing? What would be a good measure of the sustainability of fisheries, recreational or commercial, in the area? How are those linked to other measures of ecosystem health?

**Due April 15**

12. Apr. 16

### **Environmental activism**

**Readings:** Brehm, et al. “Community Attachments as Predictors of Local Environmental Concern: The Case for Multiple Dimensions of Attachment”; Parisi, et al. “Civic Responsibility and the Environment: Linking Local Conditions to Community Environmental Activeness.” Hibbard and Madsen, “Environmental Resistance to Place-Based Collaborations in the U.S. West.” Sturtevant and Bryan, “Commentary on ‘Environmental Resistance to Place-Based Collaboration’ by M. Hibbard and J. Madsen.” Hibbard and Madsen, “Response to Sturtevant and Bryan” *Measuring Community Success*, “Outcome 4, indicator 6.”

**Due April 20**

**Assignment:** How members of the local community involved in natural resource management? What would be a good measure to determine if they are effective? Map how one of the groups you feel is most effective mobilizes other community capitals to improve natural capital.

**Due April 22**

13. Apr. 23

### **Synthesis of different approaches to CBNRM**

**Readings:** *How Context Matters*, ch. 7

**Due April 28**

**Assignment:** Map how your various indicators of different aspects of ecosystem health are related to one another. Explain those relationships. When there is no relationship, consider the reasons. Show how each of these measures affects and is affected by all the community capitals.

**Due May 4**